

STOKES VACUUM

PHARMACEUTICAL Freeze Dryers

Stokes freeze dryers have been designed to meet the demanding requirements of the pharmaceutical industry. The result is equipment that will perform reliably and productively within your most critical operating parameters.

Features

- All systems meet CGMP requirements.
- Various control systems are available to automate the drying cycle, steam sterilization and condenser defrost.
- Patented internal stoppering system — maintains sterility and provides adjustable stoppering pressure. The system is drift-free, and stoppers all common vial sizes.
- Chambers and external condensers are ASME code stamped and are available in various types of stainless steel.
- Efficient plate-type condenser design.
- Dual refrigeration and vacuum systems significantly reduce product loss due to equipment failure.
- Modular design to fit your installation space requirements.



Packaging - Processing
Bid on Equipment
1-847-683-7720
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Standard and custom designed pharmaceutical lyophilization units in sizes ranging from 24 to 450 sq. ft. All units meet CGMP requirements and include stoppering, ASME Code stamped chambers and condensers and advanced microprocessor control systems.

STOKES® LYOPHILIZER SPECIFICATIONS

MODEL	24-PV	48-PV	72-PV	132-PV	220-PV	450-PV
SHELVES:						
AREA (M ²)	24 FT ² (2.23 M ²)	48 FT ² (4.46 M ²)	72 FT ² (6.69 M ²)	132 FT ² (12.26 M ²)	220 FT ² (20.45 M ²)	450 FT ² (41.81 M ²)
NUMBER	4	4	6	11	11	15
SIZE (WxD) (CM)	2'x3' (60.96x91.44)	3'x4' (91.44x121.92)	3'x4' (91.44x121.92)	3'x4' (91.44x121.92)	5'x4' (152.4x121.92)	5'x6' (152.4x182.88)
CLEARANCE (CM)	4.25" (10.79)	4.8" (12.19)	4.5" (11.43)	4.5" (11.43)	4.5" (11.43)	4.5" (11.43)
TEMPERATURE RANGE	-55°C to +85°C	-55°C to +85°C	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C	-50°C to +85°C
CONDENSER:						
AREA (M ²)	27 FT ² (2.51 M ²)	50 FT ² (4.64 M ²)	50 FT ² (4.64 M ²)	125 FT ² (11.61 M ²)	265 FT ² (24.62 M ²)	(2) 265 FT ² (49.24 M ²)
CONDENSING RATE (1)	4.4 LBS/HR (2 L/H)	12.5 LBS/HR (5.5 L/H)	12.5 LBS/HR (5.5 L/H)	27 LBS/HR (12.5 L/H)	42 LBS/HR (19 L/H)	80 LBS/HR (36.5 L/H)
ICE CAPACITY (2)	103 LBS (47 L)	220 LBS (100 L)	220 LBS (100 L)	550 LBS (250 L)	1160 LBS (525 L)	2320 LBS (1050 L)
VAPOR VALVE SIZE	10"/EX. COND.	N/A	16"/EX. COND.	24"/EX. COND.	36"/EX. COND.	30"/EX. COND.
LOCATION	INTERNAL (2)	INTERNAL ONLY	EXTERNAL	EXTERNAL	EXTERNAL	EXTERNAL
INTERNAL STOPPERING:	HYDRAULIC-UP	MECHANICAL	MECHANICAL	MECHANICAL	MECHANICAL	MECHANICAL
REFRIGERATION:						
MAIN COMPRESSOR	(1) 10 HP, TWO STAGE	(1) 20 HP, TWO STAGE	(1) 20 HP, TWO STAGE	(2) 20 HP, TWO STAGE	(2) 30 HP, TWO STAGE	(4) 30 HP, TWO STAGE
AUXILIARY (SHELF) COMPRESSOR	(1) 2 HP, SINGLE STAGE	(1) 3 HP, SINGLE STAGE	(1) 3 HP, SINGLE STAGE	(1) 5 HP, SINGLE STAGE	(1) 7½ HP, TWO STAGE	(1) 30 HP, TWO STAGE
VACUUM SYSTEM:						
TYPE (STOKES)	MODEL V-013-2	MODEL 149H	MODEL 149H	MODEL 212H	MODEL 212MB	(2) MODEL 212MB
DISPLACEMENT	20 CFM (9.44 L/SEC.)	80 CFM (37.76 L/SEC.)	80 CFM (37.76 L/SEC.)	150 CFM (70.8 L/SEC.)	245 CFM (115.6 L/SEC.)	(2) 245 CFM (231.28 L/SEC.)
EVACUATION TIME TO (100) (%)	25 MIN.	15 MIN.	15 MIN.	20 MIN.	20 MIN.	20 MIN.
LEAK-UP RATE (OVERALL SYSTEM)	55µ/HR	30µ/HR	30µ/HR	25µ/HR	20µ/HR	15µ/HR
UTILITIES:						
ELECTRIC (3)	230/3/60-85 FLA	230/3/60-170 FLA	230/3/60-170 FLA	460/3/60-145 FLA	460/3/60-290 FLA	460/3/60-352 FLA
COOLING WATER (PEAK) @ 85°F	15 GPM	35 GPM	35 GPM	67.5 GPM	97.5 GPM	225 GPM
COOLING WATER (AVG.) @ 85°F	8 GPM	11 GPM	11 GPM	16.5 GPM	19 GPM	40 GPM
STERILIZING RATES—HEAT UP/HOLD	50 #/HR & 3 #/HR	175 #/HR & 5 #/HR	175 #/HR & 5 #/HR	245 #/HR & 7 #/HR	425 #/HR & 10 #/HR	605 #/HR & 6.5 #/HR
APPROX. INSTALLATION AREA (WxDxH) (CM)	58"x72"x74"	13'3"x15'11"x9'4"	13'3"x15'11"x9'4"	13'3"x18'2"x12'8"	14'4"x19'11"x12'8"	16'x37'6"x15'2"
APPROX. WEIGHT	147.3x182.9x188	403.9x485.1x284.5	403.9x485.1x284.5	403.9x553.7x386.1	436.9x607.1x386.1	487.7x1143x462.3
	4500 # (2041 kg)	18000 # (8181 kg)	19,700 # (8936 kg)	29,240 # (13,263 kg)	39,200 # (17,781 kg)	62,500 # (28,350 kg)

REQUEST BULLETINS 750-2 AND 660-B